

comprising a velocity reducer above the fluid input [inlet aperture], and a flow straightener above the velocity reducer and below the first tissue mount.

10. (Amended) An apparatus for treating at least partially fixed biological tissue to inhibit calcification of the tissue following implantation in a mammalian body, comprising:

a piece of at least partially fixed biological tissue;

a container suitable for containing tissue treatment fluid and the piece of at least partially fixed biological tissue;

a shaker [means] for causing treatment fluid movement within the container; and means for heating the treatment fluid and tissue within the container.

10. 11. (Amended) The apparatus of Claim 10, wherein the piece of at least partially fixed biological tissue is a bioprosthetic heart valve leaflet [means for causing fluid movement within the container comprises a shaker].

11. 12. (Amended) The apparatus of Claim 10, wherein the shaker is an orbital shaker.

13. (Amended) [The apparatus of Claim 10, wherein the means for causing fluid movement within the container comprises a stirrer immersed in the treatment fluid] An apparatus for treating at least partially fixed biological tissue to inhibit calcification of the tissue following implantation in a mammalian body, comprising:

a piece of at least partially fixed biological tissue;

a container suitable for containing tissue treatment fluid and the piece of at least partially fixed biological tissue;

means for causing treatment fluid movement within the container comprising a stirrer immersed in the treatment fluid; and means for heating the treatment fluid.

In claims 20, 22, and 23, line 1, please replace "claim 10" with --claim 13--.

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22. 24. (Amended) The apparatus of Claim 23 [24], wherein the heater comprises a  
5 convective flow heater.

25. (Amended) [The apparatus of Claim 10, wherein the container is a flow  
container and further including a system for flowing treatment fluid through the flow  
container] An apparatus for treating an at least partially fixed sheet of biological tissue to  
10 inhibit calcification of the tissue following implantation in a mammalian body, comprising:  
a container suitable for containing tissue treatment fluid having a fluid input and  
a fluid output;  
a system for flowing treatment fluid through the flow container between the input  
and output;  
15 a tissue mount for positioning the at least partially fixed sheet of biological tissue  
within the container between the input and output and restrain its gross movement  
therein, the tissue mount being adapted to mount the tissue sheet in a planar  
configuration substantially parallel to the direction of flow of the treatment fluid; and  
means for heating the treatment fluid.

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Please cancel claims 26 and 27 without prejudice.

In claim 28, line 1, please replace "claim 27" with --claim 25--.

25 Please add the following new claims:

~~28.~~ <sup>32.</sup> An apparatus for treating at least partially fixed biological tissue to inhibit calcification of the tissue following implantation in a mammalian body, comprising:

a flow container divided into at least two sections in series separated by perforated baffles;

5 a supply of treatment fluid;

a fluid input to the container;

a fluid output from the container;

at least one tissue mount in each section for positioning the at least partially fixed biological tissue within the container between the input and output and restrain its gross movement therein; and

10 means for heating the fluid.

<sup>28</sup>  
Q4 ~~29.~~ <sup>32.</sup> The apparatus of Claim <sup>28</sup> ~~32~~, wherein the flow container is an elongated tube and the baffles are circular.

15 ~~30.~~ <sup>34.</sup> An apparatus for treating at least partially fixed biological tissue to inhibit calcification of the tissue following implantation in a mammalian body, comprising:

a flow container;

a supply of treatment fluid;

20 a fluid input to the container;

a fluid output from the container;

a tissue mount for positioning the at least partially fixed biological tissue within the container between the input and output and restrain its gross movement therein;

means for heating the fluid; and

25 at least one baffle positioned in the flow container and upstream of the tissue mount, the baffle being configured to create a substantially uniform downstream flow profile over a cross-section of the flow container.

~~31~~<sup>30</sup> ~~35~~. The apparatus of Claim ~~34~~<sup>30</sup>, wherein the baffle is a perforated plate oriented substantially normal to the direction of flow of the solution flowing through the container, and the flow container is divided into at least two sections in series, each two adjacent sections being  
5 separated by a baffle, with at least one tissue mount in each section removably secured to one of the baffles.

~~32~~<sup>32</sup> ~~36~~. An apparatus for treating at least partially fixed biological tissue to inhibit calcification of the tissue following implantation in a mammalian body, comprising:

- 10 a flow container comprising an upstanding tube;  
a supply of treatment fluid;  
a fluid input to the container at a lower end of the tube;  
a fluid output from the container at an upper end of the tube;  
a tissue mount for positioning the at least partially fixed biological tissue within the  
15 container between the input and output and restrain its gross movement therein;  
means for heating the fluid; and  
a velocity reducer above the inlet aperture, and a flow straightener above the velocity  
20 reducer and below the first tissue mount.
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20 ~~33~~<sup>33</sup> ~~37~~. An apparatus for treating at least partially fixed biological tissue to inhibit calcification of the tissue following implantation in a mammalian body, comprising:

- a container suitable for containing tissue treatment fluid;  
means for causing treatment fluid movement within the container including a stirrer  
immersed in the treatment fluid;  
25 means for heating the treatment fluid; and  
means for restraining the immersed tissue from gross movement within the container.

34- 38. The apparatus of Claim <sup>33</sup>37, wherein the means for restraining tissue from gross movement within the container comprises a porous substrate separating the tissue from the stirrer.

35- 39. The apparatus of Claim <sup>34</sup>38, wherein the container has an open mouth and the porous substrate is draped over the open mouth and separates the container into an upper portion for receiving the tissue and a lower portion for receiving the stirrer.

40. An apparatus for treating at least partially fixed biological tissue to inhibit calcification of the tissue following implantation in a mammalian body, comprising:

a container suitable for containing tissue treatment fluid;

means for causing treatment fluid movement within the container; and

means for heating the treatment fluid comprising a heater that applies heat directly to the treatment fluid.

36- 41. An apparatus for treating at least partially fixed biological tissue to inhibit calcification of the tissue following implantation in a mammalian body, comprising:

a flow container suitable for containing tissue treatment fluid;

a system for flowing treatment fluid through the flow container, wherein the flow container has a cross-section oriented substantially normal to the direction of flow of the treatment fluid;

means for restraining the tissue from gross movement within the flow container comprising a mount for mounting the tissue in a planar configuration substantially parallel to the direction of flow of the treatment fluid;

a baffle positioned upstream of the mount which creates a substantially uniform downstream flow profile over the container cross-section in the region of the mount; and

means for heating the treatment fluid.